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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,654	10/17/2003	Byron C. Clayton	16-453C1	1238
7590 05/28/2004			EXAMINER	
Michael A. Miller Watts Hoffinan Co., LPA Suite 1750 1100 Superior Avenue Cleveland, OH 44114			FRANK, ELLIOT L	
			ART UNIT	PAPER NUMBER
			2125	
DATE MAILED: 05/28/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/688,654

Applicant(s)

CLAYTON ET AL.

Examiner

Elliot L. Frank

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>22 April 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The examiner has reviewed the application, including the abstract, specification and the drawings, without discovering any notable errors. Nonetheless, the applicant is encouraged to thoroughly review their submission and correct any informality encountered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,3,7-13,15,17-21,23 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Passant (US 2003/0226433 A1) in view of Susnjara (USPN 6,580,963 B2).

The limitations of the aforementioned claims, as well as the applicable citations in Passant et al. are as follows:

1. A method for optimizing the fabrication of products that include lites cut from said glass sheets (page 1, paragraph 0003) comprising:

defining a plurality of batches wherein each batch requires a specified number and type of glass lites for use in fabricating products in said batch (page 1, paragraph 0006);

[laying out a pattern of lites to be cut from a first set of glass sheets to fulfill the lite requirements for one batch in said plurality of batches;

identifying one or more underutilized glass sheets in the first set having free space with no lites designated to be cut in the one batch; and

laying out a pattern of lites to be cut to fulfill the lite requirements of one or more additional batches in said plurality of batches by utilizing at least some of the free space on the underutilized glass sheets of first set and designating other glass sheets from which to cut other lites in said additional batch.]

3. The method of claim 1 wherein the free space on the underutilized glass sheets is used to fulfill the lite requirements of more than one additional batch in the plurality of batches (page 3, paragraph 0022-0023).

7. The method of claim 1 additionally comprising cutting out lites from the glass sheets with an automated cutting apparatus and instructing an operator regarding placement of the lites into appropriate storage units positioned with respect to the cutting apparatus (page 2, paragraph 0019).

11. The method of claim 1 wherein the free space of a glass sheet is filled with different types of lites which have different type priorities and further wherein a controller heuristically changes the type priority of said lites based on input gathered

via a computer network from other machines or programmable devices (page 3, paragraph 0024).

12. The method of claim 11 wherein the different type of lites for filling free space on a sheet comprises sequential batch lites, filler lites, remake lites, remnant lites from a remnant sheet, or temporary lites from other batches (page 3, paragraph 0025).

17. The apparatus of claim 13 additionally comprising a viewing monitor and wherein the controller comprises an interface for displaying images of the sheet layout on said viewing monitor (Figure 2 and page 2, paragraph 0020).

While Passant is a glass cutting system including optimization and batch and/or lite weighting, it does not read on the specific requirements of claim 1 wherein the specific optimization layout method is recited. Passant also neglects to discuss the additional claim requirements of claims 8-10.

Susnjara, analogous to Passant in that both systems are used for optimizing material in a planar cutting system (Susnjara, column 1, lines 8-10), reads on the additional requirements of the aforementioned claims as follows:

The bracketed requirements omitted in Passant from claim 1 are read in Susnjara at column 2, line 48-column 3, line 10 wherein the optimization system identifies unused space after an order layout and uses the space to fulfill a subsequent requirement.

8. The method of claim 1 wherein in addition to laying out a pattern of lites to be cut from the first set of glass sheets, one or more remnant sheets of regions of

underutilized sheets are cut from the first set of glass sheets for later use in providing glass lites (column 3, lines 11-20).

9. The method of claim 1 wherein the fast set of glass sheets are standard size glass sheets and non-standard size remnant sheets are also identified on underutilized regions of the one or more underutilized glass sheets (column 2, lines 48-65).

10. The method of claim 9 wherein an operator is prompted to place a remnant sheet onto a cutting table from a storage unit to fulfill a requirement of one of said plurality of batches (column 3, line 26-column 4, line 10).

Claims 13,18 and 21 have the same functional limitations as claim 1, and therefore are obvious in view of the same citations in the combined references.

Claims 15, 19 and 20 have the same functional limitations as claims 3,11 and 12, and therefore are obvious in view of the same citations in the combined references.

Claims 23 and 27-32 have the same functional limitations as claims 3 and 7-12, and therefore are obvious in view of the same citations in the combined references.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined elements of the Susnjara system into Passant to have prevented 30-50% of the final sheet from a production run from being wasted by providing a system that can account for the unused space in a standard sheet (Susnjara, column 1, lines 24-36).

4. Claims 2,6,14,22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Passant (US 2003/0226433 A1) in view of Susnjara (USPN 6,580,963 B2) as applied to claims 1,13,18 and 21 above, and further in view of DeMichele (USPN 5,757,647 A).

Claims 2 and 6 depend from claim 1. Claim 14 depends from claim 13. Claims 22 and 26 depend from claim 21. Claims 1,14 and 21 are obvious in view of Passant combined with Susnjara.

In addition, Passant also reads on the additional requirements of claim 6 as follows:

6. The method of claim 2 wherein the user interface allows the user add lites to a layout in the event the user knows of a specific need that can be accommodated by unused space on an underutilized glass sheet (page 3, paragraph 0025).

While the combined references read on a multifunctional sheet cutting system, they do not make obvious the additional requirements of claim 2 wherein a monitor displays color-coded images to indicate the membership of a lite in a certain batch.

DeMichele, analogous to the previously combined references in that they all are automated systems for cutting planar materials (DeMichele, column 1, lines 15-19), reads on the additional requirements of claim 2 as follows:

2. The method of claim 1 wherein the step of laying out a pattern of lites for a batch is performed by a programmable device and wherein the programmable device interfaces with a computer monitor and additionally providing a color coding



identifier on said monitor for identifying different lites from different batches (column 5, lines 56-65).

Claims 14 and 22 have the same functional requirements as claim 2, and therefore are obvious in view of the same citations in the combined references.

Claim 26 has the same functional requirements as claim 6, and therefore is obvious in view of the same citations in the combined references.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the features of DeMichele into the previously combined references to have provided a system that could plan where the finished pane should be placed for the next step in a manufacturing operation (DeMichele, column 2, lines 10-22).

5. Claims 4,5,16,24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Passant (US 2003/0226433 A1) in view of Susnjara (USPN 6,580,963 B2) as applied to claims 1,13,18 and 21 above, and further in view of Hembree et al. (USPN 4,709,483).

Claims 4 and 5 depend from claim 1. Claim 16 depends from claim 13. Claims 24 and 25 depend from claim 21. Claims 1,14 and 21 are obvious in view of Passant combined with Susnjara.

While the combined references read on a multifunctional sheet cutting system, they do not make obvious the additional requirements of the claims 4 and 5 wherein filler lites are created.

Hembree et al., analogous to the previously combined references in that they are all sheet-cutting systems (Hembree et al., column 1, lines 8-10), reads on the additional requirements of claims 4 and 5 as follows:

4. The method of claim 1 wherein the free space on the underutilized glass sheets is also used to provide filler lites of a specified size not designated for use in any particular batch but instead on an as needed basis (column 5, lines 45-51, wherein "stock" lites are created).

5 The method of claim 4 wherein a display is used to indicate to an operator how many of the filler lites to create (column 5, lines 52-65).

Claims 16 and 24 have the same functional requirements as claim 4, and therefore are obvious in view of the same citations in the combined references.

Claim 25 has the same functional requirements as claim 5, and therefore is obvious in view of the same citations in the combined references.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the features of Hembree et al. into the previously combined references to have provided a system which both minimizes waste through optimization and keeps track of the lites produced as well as the waste pieces that can be reused (Hembree et al., column 1, lines 37-51).

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

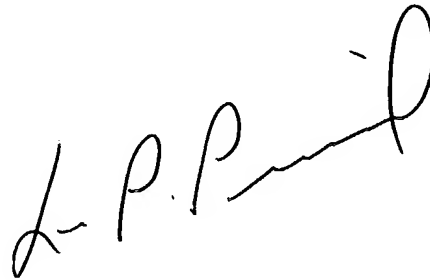
USPN 6,298,275 B1 – Herman, Jr. – Pattern cutting and grouping from a sheet

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elliot L Frank whose telephone number is (703) 305-5442. The examiner can normally be reached on M-F 7-4:30, 1st Friday off. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELF  
May 26, 2004

A handwritten signature in black ink, appearing to read 'L. P. Picard', with a large loop at the end.

LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100